DFID Department for International Development

Cranfield UNIVERSITY Silsoe

Water Law, Water Rights and Water Supply (Africa)

TANZANIA - study country report

August 1999

Authors: **Ismail Mwaka,** et al. Tanzania
(email: ruralwater@cats.net.com)

[Study country reports also produced for Ghana, Mozambique, Uganda, Zambia]

DFID KaR Project **R7327**

This document is an output from a project funded by the UK Department for International Development (DFID) for the benefit of developing countries. The views expressed are not necessarily those of DFID.

August 1999

Dr Peter Howsam
Reader (Groundwater Engineering and Water Policy & Law)
Institute of Water and Environment
Cranfield University at Silsoe
Tel: +44 (0)1525 863288
Fax: +44 (0)1525 863300
Email: P.Howsam@cranfield.ac.uk

STUDY REPORT

STUDY SUMMARY REPORT

STUDY COUNTRY REPORTS

Ghana

Mozambique

Tanzania

Uganda

Zambia

2.3 Study Country Report - **Tanzania**

TABLE OF CONTENTS

1. INTRODUCTION

1.1 BACKGROUND

The British Government through its Department for International Development DFID, initiated a study in Sub-Saharan Africa with the aim of identifying (and promoting awareness and understanding of) the constraints and enabling conditions provided by the existing water laws (statutory and customary) with regard to the poor receiving or having access to, or being entitled to, safe and reliable water supply and sanitation facilities. The study focuses on:

- the rural and peri-urban poor communities,
- water for domestic use and other rural livelihood needs, and
- sanitation, where it is part of integrated water supply and sanitation programme

Five study countries namely, Uganda, Ghana, Mozambique, Tanzania and Zambia were selected from which these five country reports together with contributions from other African countries will be presented and discussed at a regional African workshop to be held in Lusaka on 1st–2nd June, 1999. Workshop proceedings and recommendations for subsequent action and further studies will be compiled into a report.

1.2 PARTIES INVOLVED

In order to accomplish this task, we had discussions with the following people separately:

- Mr. C. N. Sayi – Director of Rural Water Supply in the Ministry of Water
- Mr. S. Lupimo – Ass.Director of Urban Water Supply in the Ministry of Water
- Mr. S. Odhiambo – Representative of Water Aid in Dodoma region
- Mr. H. Kashililah – Dodoma Regional WAMMA Coordinator
- Mr. E. Sosola – District Water Engineer Rufiji District
- Mr. Katondo – MMK Consultants
- Ms. R. Tenga – Member of Women Professionals Association
- Mr. F. Njau – Consultant for Local Government Reform and
- Ms Rhoda Myonga – Village Chairperson (Buigiri – Dodoma Rural District)

1.3 METHODOLOGY

Basically, the study involved informal interviews with the people mentioned above and going through existing documents, Policies (Water policy) and water laws. The Ministry of water, Ministry of Health and Ministry of Local Governments provided some data which eventually acted as a base for our field trips to Rufiji district (Cost region), Kilosa district (Morogoro region) and Mpwapwa district (Dodoma region). In the districts we had discussions with few district officials and Communities and an opportunity to visit few (operational and non operational) water schemes.

2. NATURE AND STATUS OF THE STATUTORY LEGAL FRAMEWORK FOR WATER AND SANITATION

2.1 NATIONAL WATER LEGISLATION

Basically in Tanzania water is regulated through two broad legal framework namely:

- Water Resources Management and
- Water Supply

Other relevant legislation exist including International River Basin Treaties. All these pieces of legislation's are detailed in the paragraphs which follow.

2.1.1 Water Resources Management

Water Resources Management is governed by:

- Water Utilization (Control and Regulation) Act No. 42 of 1974, as amended by Acts No. 10 of 1981 and No.17 of 1989
- Water Laws (Miscellaneous Amendments) Act No.8 of 1997, and
- Water Laws (Miscellaneous Amendments) Act of 1999.

In terms of Section 8 of the Water Utilization (Control and Regulation) Act No. 42 of 1974 all water is vested in the United Republic, and in that context the Ministry of Water is mandated to deal with all matters pertaining to the administration and conservation of water.

The thrust of the Water Utilization (Control and Regulation) Act No. 42 relates to the administration of granting of rights to the use of water. The Act is totally silent on the question of water protection, and that being the position, Water Utilization (Control and Regulation) Amendment Act No. 10 of 1981 was passed with specific intention of filing the gap by providing water quality standard in respect of effluents and receiving waters.

The Water Quality Standards as stipulated in the Amendment Act No. 10 of 1981 were temporary pending formulation of a permanent one. However, no time frame is provided for putting in place a permanent one. Even the same could become operational, it was repealed and substituted thereof, vide GN 31/83 – Water Quality Standards which can be cited as Rectification of Printing Errors (Act No. 10 of 1981) order of 1983. To crown it all, Act No. 10 of 1981 became operational on the 1st day of April, 1988.

The amendment No. 17 of 1989 of the above Act was directed towards the enhancement of penalties which were seen to be inadequate.

Three important organs are provided in the Water Utilization (Control and Regulation) Act in a bid to facilitate smooth administration and conservation of water in the country namely, Central Water Board, Basin Water Boards and Principal Water Officer.

Central Water Board

The Central Water Board is established under Section 5 (1) of the Water Utilization (Control and Regulation) Act No. 42 of 1974 as amended by Act No. 10 of 1981. It consists of a Chairman who is appointed by the President and not less than 10 nor more than 15 members who are appointed by the Minister from among persons holding qualifications in scientific technical fields of learning, or having adequate knowledge and experience in the public affairs of Tanzania.

The regulatory of the body are embodied in section 6(i) of Water Utilization (Control and Regulation) Amendment Act No. 10/1981 and among other things the body acts as principal advisory organ in matters pertaining to the utilization of water and in relation to control and regulation of water pollution.

Basin Water Board

Basin Water Boards are established under section 7(1) & (2) of the water utilization (control and regulation) act no. 10 of 1981. The minister is empowered to designate any area of land to be a water basin in relation to any river. The board consist of a chairman who is appointed by the minister and not less than seven nor more than ten persons to be members of that basin board.

The functions of the Basin Water Boards are the same as those of the Central Water Board save that they confine their activities to their area of jurisdiction. In terms of section 7(1) of the Water Utilization (Control and Regulation) Act No. 10 of 1981 the minister gazetted nine basins namely:

- Ruvu/Wami Basin
- Pangani Basin
- Rufiji Basin
- Ruvuma/Lukuledi/Mbemkuru Basin
- Lake Nyasa Basin
- Lake Rukwa Basin
- Lake Natron/Manyara/Eyasi Basin
- Lake Victoria Basin
- Lake Tanganyika Basin

At the moment two basins are operational namely Pangani Basin Water Board with offices at Hale (Tanga) and Rufiji Basin Water Board in Iringa municipality.

Further it is observed that Lake Nyasa Basin, Lake Victoria Basin and Lake Tanganyika Basin are international drainage basins which of necessity would require consultation with other co-riparian states to avoid unilateral acts which may adversely affect the legal right of a Co-riparian state. However, in terms of Helsinki Rules of 1966 each basin state has right to an equitable share in the beneficial use of the water of international drainage basin.

Principal Water Officer

Section 4(1) of the Water Utilization Act No. 42 of 1974, provides for the appointment of a Principal Water officer by the Minister. The Principal Water officer deals with all matters pertaining to the apportionment of national water supplies, the determination, diminution or modification of water rights, the measures to be taken in case of drought and priorities to be given from time to time, prevention of pollution, etc.

In undertaking the above tasks, the Principal Water Officer shall be advised by the Central Water Board, however, he shall not be bound to follow that advise. The Principal Water Officer is supposed to attend to 155 national water supply sources as per Government Notice No. 242 of 1975 save for areas where Basin Water Boards are operational.

Pollution Control

Water Utilization (Control and Regulation) Amendment Act No. 10 of 1981 was passed by Parliament with specific intention of water protection by providing water quality standards in respect of effluents and receiving water which shall be complied with water users before or during discharge into a water course. It should, however be noted the Act No. 10 of 1981 became operational from 1st day of April, 1988 in line with section 2 of the same Act which stipulate that:

> ”This Act shall come into operation on such date as the Minister, may by notice published in the Gazette, appoint.”

The Act was in abeyance for seven year without a plausible explanation to that effect. The Water Quality Standards as stipulated in Act no. 10 of 1981 are temporary pending formulation of a permanent one, but time frame is not provided for. Even the same before it could become operational, it was repealed and substituted therefore, vide GN 31/83 Water Quality Standards which can be cited as Rectification of Printing Errors (Act No. 10 of 1981) Order 1983.

Economic Water User Fees

Economic Water User Fees were introduced vide Government Notice No. 347 of 1994. Under section 38(2) of the Water Utilization (Control and Regulation) Act No. 42 of 1974. Water user fees are divided as hereunder.

- Domestic/Livestock, Fish farming/District Center/Rural
- Irrigation
- Power Royalty preinstalled Capacity
- Industrial/Mechanical
- Commercial/Regional Centers

As can be seen each of the water users e.g. Irrigation, hydropower, domestic etc is managed by a separate department independent of each other and hence one can not rule out inter sectoral conflicts over jurisdictional responsibilities.

2.1.2 Water Supply

Water Supply Aspects are governed by:

- Urban Water Act No. 7 of 1981
- Water Laws(Miscellaneous Amendments) Act No. 8 of 1997.
- Water Laws (Miscellaneous Amendments) Act of 1999

Urban Water Act No 7 of 1981

Urban Water Act No. 7 of 1981 was enacted to make provision for the regulation of water utilization in urban areas through the National Urban Water Authority. Some of the functions of the National Urban Water Authority were:

- to secure the continued supply of water in towns for all lawful purposes.
- to maintain and develop waterworks in towns or waterworks connected with the supply of water to towns.

It was envisaged that the National Urban Water Authority would cover the entire regional urban centers in the country in terms of provision of water to the public.

Water Laws (Miscellaneous Amendments) Act No. 8 of 1997

Water Laws (Miscellaneous Amendments) Act No. 8 of 1997 has reduced the scope of the Urban Water Act No. 7 of 1981 to the City of Dar-Es-Salaam and Kibaha and Bagamoyo towns in Coast Region. In terms of Section 5 of the Act, Dar-Es-Salaam Water Supply and Sewerage Authority (DAWASA) has been created and the same has been empowered to add to its functions the sewerage services initially belonging to the municipal council to "operate commercially out of the services it provides to the public, and ensure that the revenues of the Authority are sufficient to meet its outgoing expenditure including any debt services charges.

This Act empowers the Minister to transfer the functions of a Water Authority to "any person or persons other than the Water Authority" and more important to merge the provision of water supply with the sewerage services.

Water Works Ordinance

Water Works Ordinance, Cap 281, was enacted in 1949 to provide for the administration of public – owned "waterworks" which are defined in section 2 of the ordinance as:

> "All reservoirs, dams, weirs, tanks, purifying plants, cisterns, tunnels, wells, boreholes, filters, settling tanks, conduits, aqueducts, pipes, foundations, standpipes, hydrants, tape, pumps, engines constructed for obtaining, storing, purifying, conveying, distribution, measuring or regulating water which are used or have been constructed by or on behalf of the Government and are property thereof or which shall hereafter be used or constructed by the Government or by the Water Authority."

Section 5 of the Ordinance empowered the local Water Authority to construct new waterworks on the area. The water Authority has power to lay pipes on public as well as private lands, after giving reasonable notice to the persons concerned (section 7 and 8).

No financial provisions were included in the ordinance, simply because the supply of water was not meant to be a commercial undertaking. Rather the running of public water infrastructure was a Ministry or Government agency activity, financed out of public funds appropriated by Parliament.

Water Laws (Miscellaneous Amendments) Act, 1999

The Enactment in February 1999 of the Water Laws (Miscellaneous Amendments) Act was a significant legislative piece in the water and sewerage sector. The thrust of the Act is geared towards facilitation of Private Sector Participation in the water supply and sewerage in Tanzania.

The Government has resolved to involve a Private Operator in the Dar-Es-Salaam Water and Sewerage Authority and it is envisaged that this is the logical destination for the rest of the urban centers as funding from traditional sources continues to be insufficient to cater for sector requirements.

In terms of section 5C (1) of the Water Laws (Miscellaneous Amendments) Act of 1999, there is a provision for the Private Operator to be regulated by a Water Regulator. The Water Regulator is a body corporate whose functions under Section 5E(1) inter-alia includes:

- To exercise licensing and regulatory function in respect of water supply and sewerage services including the establishment of standards relating to equipment attached to water and sewerage system;
- To provide guidelines on tariffs chargeable for provision of water supply and sewerage services;
- To examine and approve tariffs chargeable for provision of water supply and sewerage services;
- To protect the interest of consumers as well as those of the water operators.

2.2 THE NATIONAL WATER POLICY

Water is a basic natural resource required to sustain life and plays a deciding role in social as well as economic development. All the water in the country is vested in the United Republic of Tanzania. It is a common use resource which touches on the lives, social and economic well-being of the people. It is from this background that the Government recognizes that water is a public good of a very high value. Because it is scarce, and because of the externalities which result from its use, and misuse, the Government realizes the need for intervention in order to improve the management of water resources which is used by different segments of the society in various ways. Being scarce and vulnerable, it imposes strong interaction conflicts between users and the environment.

In 1971, the government launched the 20 year rural water supply programme(1971-1991) intended to provide safe and potable water to all of the rural population within a distance of 400 meters from each household. However by end of 1991 less than 50% of the rural population had access to safe water.

Water policy reviews before launching have been carried out in Tanzania for several years and in fact the process started way back in 1986 when it was realized that the target of providing a safe and potable water within 400 meters to every household by the year 1991 would not be feasible and hence pushed to year 2002. It did not take long before realizing that this target too was not feasible.

In 1991 the Government launched a water policy for overall development management of water resources. The policy focuses on participatory planning, and cost sharing in the construction, operation and maintenance of community based domestic water supply systems.

In 1993 the then Ministry of Water, Energy and Minerals initiated a review of the Water and Sanitation sectors to identify constraints, plan interventions to facilitate sector progress, improve access to information to assist future planning and seek the commitment of External Support Agencies (ESAs) and Non-Government Organizations (NGOs) to support specific initiatives. The review came up with the findings that the policy does not adequately address cross sectoral interests in water, watershed management or sustainable river basin management. These weaknesses in the water policy coupled with population growth, the institutional financial constraints and poor operational infrastructure posed a monumental problems in water resources management.

Further to the above initiative the ministry undertook, in 1994/95 a Rapid Water Resource Assessment (RWRA) with a view to having a quick identification of resource availability, resource use and the priority issues to be addressed in each of the major river basins. Major issues and recommendations from RWRA includes the need to;

- Review the 1991 water policy so as to make it move elaborate on river basin management.
- Strengthen water resources assessments both in their quantity and quality as well as monitoring of aquatic ecosystems.
- Improve water rights administration and pollution control.
- Improve cross-sectoral planning.
- Introduce a participatory approach of stakeholders in river basin management etc.

As envisioned in the Water Sector and Sanitation Review and detailed in the Rapid Water Resources Assessment, a comprehensive water resources management strategy was deemed necessary to foster sustainable water resource development and management. In the past, water resource development in the country was being managed following sectoral, regional and district interests. This made it rather difficult to clearly understand the resources available in a hydrological unit. Having realized this deficiency the Government has adopted a river basin as a planning unit. Thus analysis, evaluation and management is to be made at the basin level.

Currently the Government has secured credit from IDA for River Basin Management as well as for undertaking the policy review. Among several considerations to be included in the review of the existing policy are:

- The allocation of water as a social and economic good with a value in its competing uses.
- The use of water user fee as a means of encouraging efficient use of the resource and for meeting the cost of the regulatory functions.
- Clear recognition of stakeholders rights and the need for their participation in water management activities especially women.
- Clear indications that there will be periodic review on fees, charges and fines to discourage water pollution and other forms of misuse.
- Clear statement that indicates moving basin management operations towards self-financing.

Policy Objectives

The policy is based on the following broad development objectives:

- To increase the productivity and health of the population through the provision of safe and adequate water supply and sanitation services to the people.
- To identify and preserve water sources and catchment areas.

The Major Parameters to be Addressed in the Policy are:

- Community Participation
  Community participation (CP) in water supply activities has been common practice especially in rural areas of Tanzania. People in villages are known to have cooperated in digging wells for domestic water supply or in constructing irrigation furrows. Although involvement of people in water activities was a known fact yet the water sector had no official policy on this.

  It is only recently that the government, through the water policy officially declared CP as a development strategy in the water supply and sanitation sector. The water policy promotes the role of communities in the operation and maintenance of their water supply systems. The policy provides for the full involvement of users at all stages of the project cycle:- preparation, implementation and operation and maintenance and other aspects of sustainability. Community groups and other entities are encouraged to assume ownership of water supply schemes.

  However, CP defined in the water policy differs significantly from CP as practiced in the past. CP as contained in the water policy is not restricted to provision of free and unskilled Labour, but requires the community to be involved in aspects of planning, operation and maintenance. It also requires the management of water schemes to be community-based rather that creates government-based and calls for a completely new approach which relies more on people's initiatives and resources.

- Community–based Management

  In the past, it was the practice to entrust responsibilities of operation, maintenance, administration and financing of O&M costs of water schemes to local council. However, this approach has not been successful. Although local councils had the necessary authority to collect money from communities for running water projects, yet there were several factors which reduced their effectiveness as managers of water supply schemes. These were:-

  - Local councils were usually established at levels which were higher than villages or communities and the water supply systems did not always cover all the villages or communities in any given local council jurisdictional area. Consequently, it was rather difficult for the section of the community that was not served to understand why they should contribute to the running of the water supply system which was not serving them;
  - Local councils had other tasks beside water supply which attracted attention and finances;
  - Local councils were also responsible for other sectors in addition to water supply sector thus, funds intended for water supply were being diverted to other sectors.

  Experience from water projects managed by communities show that it is preferable for organizations intended to run water projects to be formed at the lowest level possible. This can be at a single village, group of villages or neighborhood (in case of urban areas) level. Community-based management of the scheme is expected to be realized through the establishment of water committees, or water user associations as well as delegating both financial and technical management of the water schemes to water committees. The policy requires that all villages with or without facilities should establish a water fund to demonstrate their willingness to sustain the water facilities.

- Institutional Aspects

  The roles of the different sector agencies have been extensively highlighted in the water policy, emphasizing the need for increased cross-sectoral co-ordination.

- Cost sharing (for rural) and full cost recovery (for urban)

  The cost sharing system being promoted by the Governments was yet to be made obligatory. It should be a condition that only those who are ready to contribute financially towards project construction and/or improvement of their water supply schemes should be assisted. When a scheme starts operating, beneficiaries should contribute towards O&M costs. This way, more people will benefit by getting potable water and sustainability will be enhanced. This is in line with the social services sector reforms currently being introduced by the government. As regards urban areas, water supply and sewerage should be operated commercially with full cost recovery.

- Full ownership of the projects

  Communities encouraged to organize themselves in managing their own water supplies. This approach will reduce the over-dependency on the government, and

subsequently consumers will take full control of their water supplies and ensure sustainability.

- Involvement of the private sector
  The government to promote private sector and individuals to participate in the planning, construction, supply of materials and equipment as well as in the management of water supply schemes.

- Water Resources And Environmental Awareness
  The country is endowed with a number of water sources. However, these sources are unevenly distributed and many are not reliable. The policy aims at ensuring that all sources are protected and optimally utilized.

- Improved Integration Of Water And Sanitation Activities
  The policy calls for a coordinating mechanism that will make this integration effective.

- External Support Agency Assistance
  The policy gives guidelines for ESA's support to the sector and it aims at achieving full co-ordination of external support in the sector.

Water Use In General

Irrigation, power production, industrial and domestic water supplies are areas which have a high demand and use of water resources in the country. On a smaller scale water resources are also utilized for fisheries, transport and livestock

(i) Irrigation
Most crop production in Tanzania is rainfed, irrigation may therefore be seen in many areas as a protection against drought and as a means for stable crop production. In some areas however, irrigation is used for dry season farming mainly for production of horticulture and vegetables. The government policy on agriculture attaches great importance to the development of the nation's considerable potential for irrigated agriculture. At present about 145,000 hectares of irrigated agriculture have been developed. The major crops irrigated are sugar cane, rice and tea. The national irrigation potential is about one million hectares. About 60% of the irrigation potential in Rufiji Basin is in the Kilombero and Lower Rufiji while 40% lies in the dry Usangu and Pawaga plains in the Great Ruaha Basin.

(ii) Hydro-power
Most of the country's hydropower potential is in the Rufiji river system. Other rivers with hydropower potential are Kagera, Wami and Pangani. Most of the hydro-power potential for Pangani and great Ruaha has been developed.

Currently there are conflicts between the sectors of Agriculture and hydropower production. The nature of configuration of major irrigation projects and hydropower plants in Pangani and great Ruaha is such that irrigation take place

upstream of the hydro-power plants.

(iii) Domestic Water Supplies
Much of the domestic water supply sources is from surface water. Traditionally water for domestic purposes has been obtained from natural sources such as springs, lakes and streams. Shallow wells may be constructed where conditions are favorable. Groundwater sources, though potable in most cases, are not used to great extent, this is due to the fact that ground water recovery sometimes needs a higher and expensive technology than surface water extraction.

(iv) Water Supply for Industries
Water for use in industries is usually obtained through municipal water supply systems, though there are some private (groundwater) supplies. Industries may find it cheaper to use own sources for cooling and other non-process purposes for which water of potable quality is not required.

(v) Rural Water Supply
The rural water supply coverage of 48% in terms of installed capacity is obtained mainly from springs, lakes and streams. Shallow wells do complement surface water. The above coverage does not take into account the quality of water supplied and the fact that a good number of the schemes are either partially or completely un-operational.

(vi) Urban Water Supply
Urban water supply coverage is rated at 68% obtained primary through the municipal water systems though there are pockets of underground water here and there.

Water Quality Degradation

(i) Pollution
Deterioration of the water quality in rivers and lakes is a serious problem, resulting in water resources becoming unfit for human consumption and other purposes. The water quality deterioration is caused primarily by human activity such as discharge of untreated waste water from towns, industries and mines, discharge of nutrients and excess agrochemicals from agricultural areas, pollution caused by livestock, and increased sediment loads due to deforestation and inappropriate cultivation practices.

In the Lake Victoria Basin, the lake suffers from discharge of raw sewage and untreated industrial effluents from the Mwanza Municipality. Further upstream of the Catchment, agricultural run-off causes pesticide and fertilizers to flow into the lake. More serious is the pollution by heavy metals, most notably mercury, which is used extensively in the mining and processing of gold.

(ii) Impact of Human Activities
The most significant human impact on water resources development and management is the population growth which, if combined with economic development, results in increasing demand for the finite resource. Hence, the water

availability per capita is steadily decreasing, while human impact on resources is increasing. Human activities impact not only the water quality but also the general availability of water resources and the state of ecosystem.

Protection of Riparian Ecosystem

Water is a vital part of the environment and home to many forms of life on which the well-being of human being ultimately depends. Disruption of flows has reduced the productivity of many such ecosystems, devastated fisheries, agriculture and marginalized the rural communities which rely on these. Various kinds of pollution, including Trans-boundary pollution, exacerbate these problems, degrade water supplies, require more expensive water treatment, destroy aquatic fauna, and deny recreation opportunities.

Integrated management of river basins provides the opportunity to safeguard riparian ecosystems, and make their benefits available to society on a sustainable basis. The multisectoral nature of water resources development in the context of socio- economic development must be recognized, as well as the multi-interest utilization of water resources for agriculture, industry, urban development, hydropower generation, inland fisheries, transportation, recreation, lands management and other activities. Integration measures for protection and conservation of potential sources of fresh water supply, including the inventory of water resources, land use planning, forest resources management and utilization, protection of mountain slopes and river banks and other relevant development and conservation activities.

The Basin Water Boards have been established for the purpose of proper management of the sources. They are responsible for the close monitoring of the water utilization and pollution control.

2.3 OTHER RELEVANT LEGISLATION

(a) **The Rufiji Basin Development Authority Act, 1975**
This establishes an Authority, which has been charged with the responsibility of managing the Rufiji River Basin.

(b) **Public Health (Sewerage and drainage) Ordinance , Cap 336**
It deals with the management of public foul water and drainage systems in urban areas. The Ordinance empowers the Authority responsible for the municipality or township sewerage and drainage management through a set of rules (Public Health Sewerage and drainage Rules 1955) to control the construction, repairs, connections to, or disconnection from, the public sewers by owners of private premises. The provisions of the Ordinance and Rules are still in force today and appear to be working satisfactorily.

(c) **Marine Parks and Reserves Act No. 29 of 1994**
This Act provides for the establishment management and monitoring of marine parks and reserves. Apart from establishing of such parks and reserves it does provide for:-

- Establishment of marine parks and reserves revolving fund

- Involvement of villages in management and benefit sharing of marine parks and reserves
- Management planning
- Detailed provisions on enforcement.

(d) **The Mining Act 1994**

The new Mining Act is the first legislation in Tanzania to make Environmental Impact Assessment (EIA) a legal requirement. Applicants of mining licenses are required by law to submit along with their application an environmental plan, including proposals for prevention of pollution, treatment of wastes, protection and reclamation of land and water resources and for minimizing the adverse effect on the environment of mining operations.

International River Basin Treaties

Tanzania is a party to various international treaties. The treaties can be divided between those with a universal application and those limited to a Region, and in this case Africa to which this paper will confine. In Tanzania following the principles and practices of English Common Law, it is the Prerogative of the President to sign international treaties followed by ratification and incorporation in a national legislation in order to have a force of Law. The practice in Tanzania has been that the treaty is signed subject to ratification either by tabling it before the Cabinet or by a resolution adopted by the Parliament. The Practice currently used is ratification by the Parliament as provided for by Article 63(3) (e) of the constitution of the United Republic of Tanzania.

This is followed by incorporation of the treaty into a national law by enacting a legislation entitled Implementation Act or Simply enacting a legislation incorporating international treaties without using the title Implementation Act. Much as Tanzania is a party to many international treaties, it has been cautious in incorporating them into national laws. However, lack of incorporation does not render the treaty signed to be completely of no effect to Tanzania.

The Court of Appeal in a 1993 judgement upheld that the fact that an international agreement, to which Tanzania is a party, if not incorporated into the Tanzanian Law does not absolve the government of the duty to adhere to its undertaking in that agreement.

Tanzania shares several water bodies with neighboring countries. These include the three Great Lakes: Victoria, Tanganyika and Nyasa. Others are Lakes, Chula and Jipe and Rivers Kagera, Ruvuma, Songwe, Mara, Pangani and Umba. Tanzania is actively involved in discussions with some riparian countries on joint basin water management concerns. Co-operative mechanisms in which Tanzania is involved are:-

(i) The Nile Basin Initiative (NILE-TAC & NILE-COM) for the protection of the Nile Basin on the equitable utilization of its waters.
(ii) ii)The Kagera River Basin Development Organisation (K.B.O.)
(iii) iii)Lake Victoria Environment Management Programme
(iv) iv)SADC Protocol on shared water courses
(v) Joint development on Songwe River Basin.

(i) Nile Basin Initiative

The Minister responsible for Water affairs in some of the Nile Basin countries namely Egypt, Sudan, Rwanda, Tanzania, Uganda and Zaire who met in December 1992 agreed that co-operation on Nile water resources matters should be pursued, at least for a three year transitional period under TECCONILE, which became operational in January 1993. This transitional period was extended by three years to December 1998. With the assistance of the World Bank an all inclusive agreement of all ten riparian states (Tanzania, Kenya, Uganda, DCR, Egypt, Sudan, Burundi, Rwanda, Eritrea and Ethiopia) has been signed and takes over from TECONILE pending the finalization of the co-operative legal framework being undertaken by Panel of Experts representing the 10 riparian states. The interim setup referred to as the Nile Basin Initiative is based on the vision "To achieve sustainable socio-economic development through the equitable utilization of, and benefit from, the common Nile Basin Water Resources". The objectives of this initiative are:

- To develop the water resources of the Nile Basin
- To ensure efficient water management and the optimal use of the resources
- To ensure cooperation and joint action between the riparian countries, seeking win-win gains
- To target poverty eradication and promote economic integration
- To ensure that the program results in a move from planning to action

(ii) Agreement for the Establishment of the Organisation for the Management and Development of the Kagera River Basin (KBO)

The agreement for the establishment of the organisation for the management and development of the Kagera River Basin was first signed on 24th August 1977 and later revised on 22nd April 1990. The Members include Burundi, Rwanda, Uganda and Tanzania. The territorial jurisdiction of the organisation is the area drained by the Kagera River and its tributaries and sub-tributaries. The objective of the organisation is to develop and manage the water and hydropower resource of the basin. The organization's activities include hydropower development, agriculture, transport and communication. However, due to civil strife in the neighboring countries - Rwanda and Burundi the envisaged KBO action programme has been stalled for five years now. Every effort is being made to revive the organization's activities.

(iii) Lake Victoria Environment Management Programme (LVEMP)

Lake Victoria is a shared water body by three riparian countries of Kenya, Uganda and Tanzania. The Lake covers a surface area of 68800km 2 out of which 51% is in Tanzania. Lake Victoria Environment Management Project is a five year (1997-2001) project aimed at improving the lake ecosystem for the benefit of the people who live in the catchment.

The project is being funded by the World Bank (IDA) through the Global Environment Facility (GEF) and the three riparian countries. The project activities which are multi-sectoral in nature include Fisheries management and research, water hyacinth control, water quality ecosystem management, industrial and municipal waste management, land

use and wet land management.

(iv) SADC Protocol on Shared Water Courses

The SADC Protocol on share watercourses was signed by the heads of states of Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, Swaziland, South Africa, Tanzania, Zambia and Zimbabwe in 1992. By and large, the protocol has borrowed heavily from the Non-navigational use of Trans boundary water and the Helsinki Rules of 1966.

(v) Joint Development on Songwe River Basin

This is a joint Tanzania Malawi cooperation undertaking intended to solve problems of continuously changing Songwe River course which is the common boundary between the two countries. Related problems include floods and the resulting flood damage and under utilization of land and water resources in the Songwe River Basin, particularly its flood plain. It is a pre-investment study that will form the basis for preparation of a Songwe River basin development plan which will include hydropower, irrigation, fisheries and tourism. The study commenced in 1998.

2.4 CURRENT STATUS AND PRACTICE

This report is not someone's view but in fact it is the real situation in the country. The conflicts between different laws is something which needs urgent intervention because it is creating some misunderstanding especially in the issues of ownership of community based water supply and sanitation schemes.

As far as sanitation is concerned, data of sanitation coverage (available in the Ministry of Health) in Tanzania shows that sanitation coverage is relatively high, but in the other hand, reported cases caused by poor sanitation are also very high something which contradicts itself. The people in the health sector we talked to had no clear explanation of the conflicting information reflected by this data.

3. NATURE AND STATUS OF CUSTOMARY (TRADITIONAL) WATER RIGHTS

In Tanzania, before independence customary laws were closely followed and respected. Unfortunately these laws were not written something which makes it difficult to study them. Intensive documentation of these laws and their study needs to be done. Furthermore, after independence, all traditional laws were not given priority hence few people knows them.

4. NATURE AND STATUS OF WATER SUPPLY AND SANITATION PROVISION

4.1 BACKGROUND

Water supply and sanitation provision in Tanzania is not only the responsibility of the

Ministry of Water, but also that of other sector related Ministries, External Support Agencies (ESAs), Non-Governmental Organizations (NGOs), the private sector and beneficiaries.

The administration of water supply systems in Tanzania fall into two categories namely rural water supply and urban water supply. The concepts of rural water supply equally apply to peri-urban areas. Rural water supply systems are generally simple and small and they are based on Tanzanian Temporary Water Quality Standards.

Development of water supply in Tanzania started in the 1930s under the supervision of the Public Works Department until 1945 when the Water Development and Irrigation Department (WD&ID) was established. During this time, priority was directed to urban settlements, trading centers, Missions and large estates.

4.2 RURAL WATER SUPPLY

Today it is estimated that 78% of Tanzanians live in rural areas. Large scale construction of rural water supply begun in the early 1950s under the then prevailing financing arrangements. Given the colonial bias towards urban water supplies, urban/rural water supply development was uneven with rural lagging behind. It is for this reason that after independence the Government gave high priority to the development of rural water supply. The provision of free water supply then, to rural communities by the Government fitted well with the ideology of the provision of basic social services by the state as expressed in the Arusha Declaration of 1967 (Declaration of Socialism). Thereafter, there was a tremendous push for improved water supply. User contributions for operation and maintenance of schemes were abolished in 1970. In 1971 the Government declared that by 1991 the whole rural population should have easy access to adequate and safe water supply to within 400 meters of their households.

This has, ever since, remained a dream. It is estimated that by 1996, installed water supply facilities have a capacity to serve only 46% of the rural population. This does not take into account the malfunctioning schemes which account for 30% of the installations. If the remaining 52% of the rural population has to be supplied with water, development of additional resources will have to be made.

The Government lacked resources to carry-out such an immense undertaking and sustainability of the completed schemes was at stake. It therefore, became evident that the Government can not do it all alone. The Government needs the support of the people, to be involved in all stages of project initiation, planning, construction, operation and maintenance and in the overall management of the completed schemes so as to create a sense of ownership and commitment to take care of the schemes. This was the core of the 1991 National Water Policy

4.2.1 Constraints

Constraints in the rural water supply sub-sector are highlighted below:

- Priority of the water sector in the national economy

The Five Year Plan (1988/89-1992/93 indicated the low priority given to the sector. Allocation to the water sector out of the total Government budget was in 1988/89-7.4%, 1989/90-6.2%, 1990/91-5.7%, and 1992/93-4.7%. Similarly the same trend is depicted in the Rolling Plan and Forward Budget (RPFB). In the RPFB, the water sector's share of the total Government budget (development and recurrent) is as shown in the table below.

	1993/94 %	1994/95 %	1995/96 %	1996/97 %
Recurrent	1.32	1.36	1.58	1.73
Development	6.63	5.77	4.95	4.51
Total Water Sector	7.95	7.13	6.53	6.24

Thus, while the recurrent budget was increasing somehow marginally, the development budget was decreasing substantially, and the overall sector budget was declining.

Financial resources allocated to the sector has neither been commensurate with, nor reflected the priority the sector deserves in the national economy. It is tempting to conclude that there is a need to review the national priorities and macro-economic plans in order to accord water resources development and management the priority it deserves.

- Inadequate Policy Framework
  In the National Water Policy, the roles of different sector agencies have been defined, emphasizing the need for both inter and intra sectoral co-ordination. A review of the water sector in 1995, however, identified a number of shortfalls in the policy among which is the omission of the integrated water resources management concept. The review, however, fell short of addressing the involvement of various stakeholders in water resources management. Private sector involvement was also given a low priority.

- Competing demands and conflicts between and across users.
  Although land and water sector wholly or partly touch other institutions in the overall management system of natural resources of the country, the approach to water resources utilization and management is still highly fragmented. This has led to conflicts on land and water utilization. In addition, competition among various activities, domestic consumption, agriculture, industry, power supply, livestock, wildlife, etc for use of water has now become more intense, requiring better management of this resource and better mechanisms for conflict resolution.

- Lack of awareness
  The demand for water continues to rise as population grows and human activities expand. Scarcity of water resources is increasingly becoming a limitation to development. This scarcity is further worsened by lack of awareness of the general public on the fact that water is finite and an economic good; emphasis, is thus being placed on "Supply management" source protection, reduction of loses and wasteful use rather than "demand management".

- Pollution
  Pollution from point and non point sources is another growing problem and major source of conflict affecting water resources in Tanzania. Water pollution in rivers and streams typically impose a burden to downstream users. It reduces the quality of receiving waters and may generate conflicts by reducing the available usable quantity of water as well as raising treatment costs.

  Wastewater from municipalities and industries is a major source of pollution in Tanzania. Wastewater from these sources is typically discharged into receiving bodies untreated or only partially treated.

  Water pollution from agriculture and mining activities is increasing seriously in some areas in the country. The country uses a lot of agrochemicals, including fertilizers, pesticides and fungicides, to improve farm yields and control diseases. The extent of severity of water pollution with regard to the use of agrochemicals is not yet established but there exists a substantial amount of pollution judging from the rate of importation of these chemicals.

  Pollution from mining activities is also at an increase in many parts of Tanzania and have a significant impact on public health. With liberalization of trade, Tanzania has for the past few years witnessed a dramatic increase in small scale mining activities. Gold mining which use mercury in the recovery of gold is at an increase with serious impact of the quality of the water resources.

4.2.2 Future Outlook

- Decentralization of rural water supplies
  In the past, it was the government's responsibility to operate and maintain rural water supply schemes. Given central government's inability to mobilize sufficient financial and human resources to fulfil this task, the approach continued to the deterioration of rural water supplies. Solutions to the problems of operation and maintenance are now being addressed through institutional reforms aimed at decentralizing the functions of technical and financial management to lower levels and empowering communities (through relevant legislation) to manage resources at the lowest appropriate level, and create a conducive climate for stakeholder participation. The principle "thou shall not manage at a higher level that which can be managed at a lower level" is gradually being accepted in the sector. Examples of this are the Kiliwater Company Limited in Kilimanjaro Regions' Rombo District, the Ruaha Water Supply Company Limited in Kilombero District and the Uroki-Bomang'ombe scheme in Hai District.

The government is currently carrying out institutional reforms aimed at reducing and gradually removing the dependence of the Communities on the government to run their water supply schemes and has set into motion the establishment of water-user entities.

- Sectoral co-ordination
  The practice for planning has been that various sectors, villages, districts and regions planed separately their various projects in the basins without adequate co-ordination. Various decision makers have planed and decided on the same resource. This is one of the major institutional issues to be resolved if the anticipated comprehensive management is to be realized. The demand of the various sectors have to be identified and balanced with the resources.

  In co-ordination mechanisms within and across the sector, there exists overlapping and unclear definition of roles and responsibilities within the sector related institutions. There is also poor co-ordination of ESAs. It is expected that the on-going exercise on organizational reforms in the public sector will bring about positive improvements in the water sector. The need for inter and intra sectoral co-ordination has been identified as the under - pining issue towards realization of the sector objective.

- Protection of Water Resources
  Water resources protection is a rational intervention for safeguarding water supplies and water quality and to prevent damage to water resources infrastructure. It requires a well defined institutional framework including clear policies and regulation agencies with Mandate and funding to promote optimal use of the resources

- Integration of Water Supply and Sanitation
  Implementation of water and sanitation programmes has been going on since 1971. Although in theory, sanitation has been incorporated in the planning processes for many years, its planning has been done on an ad-hoc basis. Consequently, implementation of sanitation has lagged behind water supply.

  The imbalance between water supply and sanitation has been attributed to several factors, inter alia, involvement of different institutions, low priority accorded to sanitation by the users themselves as well as decision makers at all levels.

  At national level, Ministry of Health is responsible for rural sanitation and hygiene education, while Ministry of Water is responsible for urban and district sanitation and water supply in general. At regional and district levels, urban sanitation is operated and maintained by the urban councils. Community mobilization is take care of by Ministry of Community Development, Women Affairs and Children.

  As can be seen, management of the sanitation sub-sector is fragmented among different institutions. There is weak coordination between them and unclear demarcation of responsibilities, hence duplication of effort, resulting in the dispersion of scare resources.

Compared to water supply, sanitation has been given low priority at national level. For example, funding level for sewerage and sanitation has remained very low. Funds. allocated annually for sewerage and sanitation since 1979 to-date average out to 0.45% of the total government development budget. Looked at from the actual requirement, the annual allocation as compared to the annual requirements according to the five year development plan has been on the average of 30%. This has limited to a greater extent, any meaningful intervention in trying to solve the current problems.

Beneficiaries accord low priority for sanitation. Reasons could be that the effects of poor sanitation are not immediately felt by users. Unlike water, people can live without appropriate sanitation facilities. For sanitation, there is an alternative, one can use a neighbor's latrine, guest house or hotel sanitary facilities.

Sanitation is usually regarded as private good while water supply is considered as a public good. For example, it is easy to mobilize people to construct water supply systems but more difficult for sanitary facilities.

- Women Involvement
  Previous water supply and sanitation programmes including the formulation of regional water master plans did little to promote women involvement in sector activities. Woman should be encouraged and educated in order to participate in decision making, planning, implementation, operation and maintenance, monitoring and evaluation of sector programmes and projects.

4.3 URBAN WATER SUPPLY

The urban population in Tanzania has been increasing at an average rate of 6% which is well above the overall population growth rate of about 3%. The rapidly growing population on one hand and the problem of rural emigration on the other hand are the reasons for the rapid population growth in the towns. Thus, the Urban Water and Sewerage Authorities (UWSAs) are faced with a big challenge of providing the rapidly increasing population with adequate water supply and sewerage services. For a long time, investments in these services have not been corresponding to the demand.

The water demand by the urban population of 7.5 million people using an a average per capita demand of 100 lcpd is estimated at 750,000 m3/day, while the supply according to the recent evaluation report of the performance of the UWSAs water production using the capacity of the existing facilities is 523,000 m3/day. Unaccounted for water (technical losses and commercial losses) are estimated at 52%.

If all the systems were in good working condition and unaccounted for water brought down to acceptable level of around 20%, then available water supply will be about 420,000 m3/day instead of the current 251,000 m3/day. This implies that for universal coverage of water supply in the urban centers, new system with total production capacity of about 330,000 m3/day should have been constructed alongside the on going rehabilitation programme in order to meet the current water demand. Using a unit cost of TShs. 400,000 per incremental cubic meter of water, this would have amounted to a total investment of TShs. 130 billion.

As regards to sewerage, only 10% of the population is covered and the systems are in poor working condition. The recent legislation changes which allow merging management of water supply and sewerage facilities, will go a long way in redressing this unpleasant situation.

4.3.1 Constraints

The main contributing factors to the above unfavorable situation have been, low investment, old age of the existing systems, inadequate operation and maintenance, inappropriate institutional arrangement, inadequate legal regulatory framework, inadequate management capability; and of late the high cost of electricity which now consumes 70% of the revenue collected by most of the UWSAs. On the other hand, non payment of water bills by public institutions is also a problem.

- Inadequate Funding
  Inadequate funding for operation, maintenance and expansion, has resulted into the deterioration of the facilities as well as the quality of the services. This in turn adversely affected customers willingness to pay leading to low revenue. This caused a vicious circle in financing.

- Old Age of the Systems
  The existing pumping system and water treatment plants are working under installed capacity and are producing water of low quality due to old age. On the other hand, water losses resulting from leakage mainly due to old age of the distribution systems, are as high as 30-40% in most of the towns.

- Inappropriate Institutional Arrangement
  Water supply and sewerage system, until recently, were directly managed by Government which meant long bureaucratic procedures in purchases and payments, therefore adversely efficiency in operation and maintenance. There was no relationship between fund allocated and revenue collected by Water Departments. The arrangement also imposed pan territorial flat rate tariffs which did not take into account the varying costs of water production in individual towns. Furthermore, the institutional arrangement reinforced customers attitude of free water services.

  On the other hand, this environment did not encourage participation of the private sector in the delivery of water and sanitation services. Mobilization of financial resources from the private sector has therefore not been possible.

- Inadequate Legal and Regulatory Framework
  Penalties for polluting water source, misuse of water and illegal connections until recently have not been deterrent enough. On one hand, legislation does not adequately protect consumers against poor services and unfair practices by water authorities. The existing legal and regulatory framework as well does not encourage private sector participation in the delivery of water and sanitation services.

4.3.2 Future Outlook

The objective in the urban water supply and sewerage sub-sector is to ensure proper and efficient exploitation of water resources from various sources for provision of clean, safe and adequate water supply and equally important ensure there are adequate waste water disposal systems. In view of the above, the sub-sector must focus its attention on the following issues in order to attain good and sustainable services.

- Improved planning of urban water supply and sewerage infrastructures in order to narrow the gap between demand and supply. Issues related to operation and maintenance implications and balancing the capacities of various components of water supply and sewerage systems need due attention during the planning stage.

- Rehabilitation of the existing facilities to bring them to their rated capacities and expansion to cater for the unsaved and future populations.

- Sustainable financing mechanism which will enable full cost recovery and cover replacements and expansions.

- Private Sector Participation (PSP) should be involved in the management of the facilities and investment in the sector.

- Appropriate legal and regulatory framework for the Implementation of Urban Water & Sewerage Policy.

4.4 SANITATION

Sanitation by definition has a wide meaning depending on the situation and environment. Urban Sanitation as defined by the Ministry of Health, refers to waste water, solid and liquid waste management and hygiene practices, while rural sanitation is referred to as patronization, solid and liquid waste management and hygiene practices.

In Tanzania, the sanitation campaigns “Mtu ni Afya” of the early 1970s and health education activities being carried out, has created a strong awareness among Tanzania on the importance of proper sanitation.

In spite of this, sanitation situation in the country is still unsatisfactory, particularly in the peri-urban areas. Lack of sanitary facilities and safe drinking water supply have been singled out as major causes of excreta related diseases such as cholera, diarrhea, dysentery, etc.

Existing Situation

A survey conducted in the early 1980s to determine the level of sanitation in nine urban councils revealed that 85% of the urban population depend on pit latrines as their excreta disposal facility while 10% use septic tanks 5% connected to sewerage systems and 5% have no sanitation facility of any kind.

90% of the rural population use pit latrines and the rest (10%) have none. This observation has been confirmed by a recent study on sanitation carried out in some peri-urban areas in Dar Es Salaam. The study revealed that over 90% of the sample households use pit latrines and that 78% of the latrines have no roof while only about 50% of the latrines have doors. The majority of the latrines are constructed using temporary materials such as empty drums, old tires, etc.

Solid waste

Solid waste disposal is a problem which is more pronounced in urban areas. In rural areas there are traditional ways of managing solid waste such as burning, burying and utilizing it as manure but these methods are not environmentally sound because they tend to cause environmental pollution.

Measures to Achieve Proper Sanitation and Hygiene Practices

In order to achieve the sanitation target as well as complying with UN's declaration of health for all by the year 2002, the Government of Tanzania has set on intermittent goal of realizing 97% of all households to have adequate sanitation facilities. To this effect the Government pursues the following:

- ensure that there is proper collection and disposal of solid waste.
- Create conducive environment for the private sector to participate in
- collection and disposal of solid waste.
- enforce existing legislation on pollution and haphazard disposal of wastes
- encourage recycling
- enforce the present bye-laws which require every household to posses a
- proper standard sanitation facility.

5. IMPACT OF WATER LAW AND WATER RIGHTS ON WATER SUPPLY AND SANITATION PROVISION/ACCESS FOR THE POOR

5.1 ENABLING CONDITIONS

Going through existing laws and policies, it is crystal clear, that all of them were put in place with the aim of enabling every citizen to have access to water supply and sanitation services. Therefore it is correct to say that existing policies and laws are part of enabling conditions.

Procedure for Granting of a Water Right

It is the responsibility of the Principal Water Officer to issue Water Right(s) in respect of National Water Sources and Basin Water Officer/Regional Water Officer in respect of Basin/Regional Water sources.

Legislation governing the use of water should in some way specify different categories of such use. In Tanzania the categories are classified in the order of priority as a guide only and not as a directive. In granting of Water Rights, the use of Water for domestic purposes

is given the first priority followed by Livestock use and then Irrigation, Industry, Power Generation, Mining, etc. Before a Water Right is granted, an application for a water right is made, whereby the applicant is required to fill in a special designed form. “Application for a Water Right (Form A)” includes the following information:

(i) Particulars of Land in respect of which the application is made:
(ii) Particulars of Water Rights for which the application is made:
(iii) Number of customers supply to be served
(iv) Total amount of water required
(v) Whether the application is to be made appurtenant to the land or not.
(vi) Names and addresses of other users who may be affected by the grant of the right for which the application is made.

After receiving an application for a Water Right together with the application fees, the Water Officer registers it. After filling the form, other legal procedures are taken before granting a Water right.

5.2 CONSTRAINTS

(a) **Water Right’s Conflicting Areas**

The whole procedure of granting a Water Right seems to be reasonably good because it takes on board everybody and in this case protects the poor who may be refused their fundamental right to have access to water. On the other hand, this is one of the areas in urgent need for amendment of existing Legislation. A water right may be “ Personal to the granted” which means that it cannot be transferred to any other person without the consent of the Water Officer or “appurtenant to the land” which means that it can be transferred with the land whenever the ownership of the land of part of it changes hands.

Definitely the process is too long and somehow beurocractic. At the same time in Tanzania not many citizens are aware of this long procedure , especially the poor rural population.

(b) **Water use conflicts**

There are already serious water use conflicts particularly in the Pangani and Rufiji Basins. Uncoordinated developments (by different sectors) that utilize and/or affect water and land resources have resulted in big conflicts among various user groups. Conflict have been experienced between the hydropower sector mainly by the Tanzania Electric Supply Company (TANESCO) and the farmers, between groups of farmers (upstream and downstream), between the farmers and pastoralists, between Water managers and farmers, Institutional conflicts and other Users and the environment. It is expected that with proper Water Basin Boards in place, conflicts will be minimized.

Each country particularly in the developing world, is faced with water resources management problems. Some of the problems have straightforward solutions, though lack of funds is a common problem. Most problems, however, involve issues that require debate, yet remain undebated, and proposed policies are found

to be counter to those generally professed. Unfortunately, debate on policy often commences in limited subject areas before many of the preconditions that should form the basis for discussions have been resolved. The extent of the resources and their allocation must be established before development can be efficient, because they are essential guides for the formulation of effective, consistent short-term plans and real time operations. And of course, all programmes and responsibilities, including those of the beneficiaries, must be decided before financial policies can be detailed. Effective water resources management and sustainable use of the Basin's water resources require participation and involvement of Water Users and other Stakeholders at all levels. Water allocation and conflicts resolution should focus on demand and water use efficiency within the Basin.

(c) Conflicts Between Legislation and Policy

In view of the social and economic changes taking place in Tanzania and the experience gained over the period of implementation of the 1991 policy, there has been a need for a comprehensive review of the policy to take stock of the above. The Rural Water Policy component is in its final stages of preparation. The key elements of the rural water policy are:

- A complete departure from the traditional supply driven to demand responsive approach.
- Full participation of the beneficiaries in the planning, construction, management, and in general in the entire project cycle.
- Emphasis is placed on full cost recovery of the operation and maintenance costs as opposed to the old concept of cost sharing
- Water Supplies to be managed at the lowest appropriate level as opposed to the centralized management approach.
- Roles and responsibilities of stakeholder groups clearly defined including those of individual sector ministries, institutions, etc.
- Communities to own their water supply schemes legally.

Despite the good intentions spelt in the Water Policy, it seems some of the fundamental areas are in conflict with the legal framework e.g. the vesting of assets (water works) in the local government section 5(2) (a) of the Local Government Act No. 9 of 1982 defeat the noble cause of ownership of the Water Schemes by the communities.

The Local Government Act No. 9 of 1982 states: " all sums of money……..buildings , water works and all other properties of any kind vested in, belonging to, held by or supported to below to, or be held by District Development Council or held by Government for or on behalf of that District Development Council, shall, by virtue of this subsection and without further assurance, be transferred to and vest in a like interest in the district council in question…."

By virtue of the above piece of Legislation all water works, assets situated in the respective districts are deemed properties of the district council. However, the liabilities left behind by the predecessors shall remain vested and be settled by the Government. The

District Council is empowered to delegate the discharge of some of its functions to a village council or other lower government body, and in discharge of those functions, at as agent of the district council.

This piece of legislation shows the extent of the inconsistencies between the policy and the actual reality on the ground. Many rural water projects, which receive external management support, are looking for different legal options to enhance the project's sustainability.

However, when the ownership is vested in the District Council, which can also impose water rates, it remains to be seen how the communities/beneficiaries will fit in the jigsaw. To crown it, the entire village council is vested with all executive powers in respect of all affairs in the village. These are some of the rough edges, which need to be ironed out otherwise they will keep on impacting negatively to the rural poor accessing to clean, safe and adequate water supply.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS

6.1.1 Legislative Framework

Following the Water Policy Review currently in progress, the water utilization Act needs to be reviewed too as to reflect the actual situation and enforcement of laws. In the review process, emphasis should be placed on the following:

- The allocation of water as a public good and as an economic good with the value in all its competing uses.
- The use of water user fee as a means of encouraging efficient use of the resource and for meeting the cost of regulatory activities.
- Clear indications that there will be periodic reviews on the fees and penalties to deter water polluters
- Strengthening the basin water offices and other institutions charged with monitoring water quality and managing the legal and incentive framework to enhance efficient water use and maintenance of water quality.

6.1.2 Institutional Framework

There is an urgent need to separate the regulatory function from service functions. In this regard, the organisation arrangements as well as legal and regulatory framework in which the organisation operates need review so as to avoid duplication of responsibilities or waste of resource and ensure effective implementation of mandated functions.

6.1.3 Coordination

The coordination mechanism between the various institutions needs to be streamlined and clearly defined.

6.1.4 Integrated Water Resource Development Plan

For integrated water resources development in the country adequate and well trained manpower is a necessary prerequisite. Institution of the higher learning like the University of Dar Es Salaam and the University College of Lands and Architectures Studies are currently the only local training institutions for professionals in water resources and Environmental Engineering. They are potential centers of excellency in water resources management in the region. The Water Resources Institute training water technicians has a major role to play in water sources development in the country as well as in neighboring countries.

As discussed in the paper certain aspects of the current water resources management legislation (Water Utilization Control and Regulation Act) are outdated and are sometimes conflicting with other related legislation. A deliberate effort need to be made to review the legislation.

6.2 RECOMMENDATIONS

Definitely further and thorough study is needed in order to come out with the proper recommendation which will enable the water sector to tackle its responsibility.